

Games  
Table

December 13

2013

---

Principles of Furniture & Joinery Design

Coursework 3

**Table of Contents**

Introduction ..... 2

Design Objectives..... 4

Methodology..... 6

Sketches & Drawings..... 6

Estimated Time Scale ..... 7

Cutting List ..... 8

Research..... 9

## Introduction

When we first received the brief for this project, lots of thoughts and possible designs began to run through my head as I started to think of different designs that I have seen before in friend's houses and in magazines and shops etc. I thought about all the different games that can be incorporated into the table and how I could fit them in. I knew from the brief that the chess box was the main feature of the table and it had to be included in some way. I am happy and excited to be making a games table as this is my first time to be making any kind of table so I am looking forward to the whole manufacturing process as well as coming up with a final design.

I began to research game tables by looking through books and magazines as well as looking on the internet where I got most of my inspiration. From the very beginning I liked the idea of the table being able to open up to reveal the chess box and whatever else the table contained. I stuck with this idea while researching the different types of tables. I was looking at designs ranging from very simple and easy to make to very difficult and complex. I was concentrating on a number of different elements while researching designs such as the table top, table legs and the best joints to join the legs to the table. In the end I came up with a design that I really liked and one I was confident in making. I think it is aesthetically pleasing to look at and is a very elegant piece of furniture. I came to this final design by sketching out different ideas I had while trying to merge designs I had researched.

While coming to my final design I had many factors to consider such as complexity of design, manufacturing process, ergonomics and furniture standards. I knew from the start that this table could not be a really complex design because I had to consider my ability and realise what was within my capabilities. I feel my design isn't too simple or too complex, I tried to keep every element of it within my strengths and it's something I feel very confident in manufacturing.

The table consists of mahogany and beech with four legs that hold the table upright. The top of each leg will be mortised to allow for the tenon from each apron to fit into them. The bottom of the table (where the chess box sits) will be screwed into four pieces of timber that are screwed to each apron. I will probably use MDF for this. The chess box will sit on top of this board which will be split up into three sections. The table top is split in two and is

placed over this section and it is hinged to two sides which allow it to be opened up to reveal the chess box underneath. The table top is veneered to make it look more aesthetically pleasing. Once I have finished making this games table it will be strong, elegant, attractive and the stand out piece of furniture in any room.

## **Design Objectives**

### **Function**

The function of this games table is to allow people of all ages to sit down and play a game of chess by opening out the table top and finding the chess box that is underneath. They can either leave the chess box where it is or they can take it out, close the table top and place it on top of the table. This games table is not supposed to be for one purpose only. People can use it as a normal table also to do things like relax with a cup of tea or some food, or use it as a desk to study on etc.

### **Location & Proportion**

The games table will be situated in the sitting room of my house. The reason I am locating it there is because it is where family and friends gather to watch television or to play other games like the foosball table. It will look well at the side of the room just as you walk in the door. I will place two chairs beside it to make it look more inviting. The size of the table will be a suitable height for everyone in the house. I am the tallest so I allowed it to be high enough for me to use it comfortably.

### **Style**

The table is rectangular in shape and it will consist of four legs that have a design on them which I will do on the lathe. It has four aprons all joined to each leg by mortise and tenon. The whole table is made up of mahogany and beech with a bit of MDF used for the underside of the table. The table top is cut into two equal parts which both open out to reveal the chess box underneath. I have come up with a nice veneer design for the table top that I think will look very attractive. It is a diamond shape in the middle of the table top surrounded by a veneer on the edge of the table that is mitred at each corner. It can be seen in my sketches.

### Visual Impact

The visual impact of this table should be eye catching and the focal point of a room. I want people to walk into the room and notice it straight away and comment on it because it is such a nice piece of furniture and it stands out so much. Everybody who see's it will be intrigued and will want to know more about it. I think most people will be surprised to find out that it opens up to reveal a chess box inside. The veneer on the table top will be the most eye catching thing about this games table in my opinion.

## Methodology

The way I am going to construct this table is start by cutting out the design on the legs using the lathe. Once I have all four legs completed on the lathe I will move on to mortising the tops of the legs to allow for the tenons from the aprons to fit into them. I will then cut out all four tenons by hand and fit them into each mortise. I chose a mortise and tenon joint because I feel it is the strongest and best joint I could use in this situation. Also it is a joint that I have cut the most in my time as a student in TPT so I am very confident that I can do a good job.

When all these joints are tight and secure and the table is able to stand up I will screw the four pieces of 30 x 30cm red deal to each apron. These four pieces are the base on which the underside of the table (where the chess box lies) sits onto. The underside will be MDF because it's cheaper than solid wood and it does the same job as it won't be seen once it is veneered. I will screw the MDF to the pieces of red deal from underneath so the screw will not be seen. I chose to screw it because it is quicker and easier than using joints and it does the same job. I thought about using KD fittings here but I decided not to use them as I feel screws would do the same job and they are cheaper. I don't think they would lessen the integrity of my design I think they would add to it in terms of the strength and security they would add to the whole table. The main reason why I'm not using them is to save money and in the business world you have to save every penny you can to ensure a successful business and its little things like these that count.

The table top is going to be cut into two equal parts that open and close. Each side of the table top will be screwed to the two longer sided aprons using butt hinges. This allows for the two top parts of the table to be opened out and rest at a 180 degree angle either side. I plan on veneering both sides of the table top, bottom and top.

## Sketches & Drawings

The following are the sketches and drawings I did throughout this project.

**Estimated Time Scale**

<b>Week Number</b>	<b>Job Description</b>	<b>Estimated Time</b>	<b>Actual Time</b>
1	Breaking out timber + marking out	4.5 hours	
2	Marking out + Lathe work	4.5 hours	
3	Lathe work	4.5 hours	
4	Lathe work	4.5 hours	
5	Lathe work	4.5 hours	
6	Mortise and Tenon joints	4.5 hours	
7	Mortise and Tenon joints + underside of table	3 hours	
8	Sections in table + veneering	4.5 hours	
9	Veneering + making of table top	4.5 hours	
10	Veneering + table top hinges	4.5 hours	
11	Assembly of table	4.5 hours	
12	Finishing	4.5 hours	
13	Finishing	4.5 hours	

### Cutting List

ITEM	QTY	LENGTH	WIDTH	THICKNESS	MATERIAL
Legs	4	910mm	80mm	80mm	Mahogany
Apron (Long)	2	855mm	120mm	18mm	Mahogany
Apron (Short)	2	550mm	120mm	18mm	Mahogany
Base	1	855mm	550mm	18mm	MDF or Beech
Table Top	2	875mm	275mm	18mm	Mahogany
Middle section (big)	2	550mm	50mm	50mm	Beech
Middle section (small)	2	320mm	50mm	18mm	Beech
Red deal pieces (Long)	2	500mm	30mm	30mm	Red deal
Red deal pieces (Short)	2	300mm	30mm	30mm	Red deal

#### Machinery to be used:

- Band saw
- Table saw
- Lathe
- Drill
- Wall saw
- Mortiser
- Veneer machine
- Sander

Research



<http://www.jonathanknight.org/?portfolio.html>



<http://www.besportier.com/archives/coffee-game-tables-geoffrey-parker-pedestal-in-macassar-ebony-veneer.jpg>



<http://www.homethingspast.com/wp-content/uploads/2012/05/games-table.jpg>



[http://rencodesign.com/images/GameTable2\\_sm.jpg](http://rencodesign.com/images/GameTable2_sm.jpg)



<http://www.samandersonfinefurniture.co.uk/upload/portfolio/games%20table%20650x423.jpg>



[http://www.davidlinley.com/store/media/catalog/product/cache/1/image/9df78eab33525d08d6e5fb8d27136e95/g/a/games-table-open\\_5.jpg](http://www.davidlinley.com/store/media/catalog/product/cache/1/image/9df78eab33525d08d6e5fb8d27136e95/g/a/games-table-open_5.jpg)



[http://www.titchmarsh-goodwin.co.uk/admin/images/upload\\_products/800\\_1336055554.jpg](http://www.titchmarsh-goodwin.co.uk/admin/images/upload_products/800_1336055554.jpg)



<http://www.theinternationalman.com/img/group/linley-games-table.jpg>



<http://www.hmhandmade.co.uk/blog/wp-content/uploads/2012/05/IMG-20111125-00102.jpg>



[http://www.wickes.co.uk/content/ebiz/wickes/inv/159748/Brass-Butt-Hinge\\_large.jpg](http://www.wickes.co.uk/content/ebiz/wickes/inv/159748/Brass-Butt-Hinge_large.jpg)